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Application No. 04 789 595.8 - 2405	Ref. 27.48.91310	Date 02.03.2009
Applicant Melbourne Health, et al		

#### Communication pursuant to Article 94(3) EPC

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(2) EPC.

You are invited to file your observations and insofar as the deficiencies are such as to be rectifiable, to correct the indicated deficiencies within a period

of 4 months

from the notification of this communication, this period being computed in accordance with Rules 126(2) and 131(2) and (4) EPC. One set of amendments to the description, claims and drawings is to be filed within the said period on separate sheets (R. 50(1) EPC).

Failure to comply with this invitation in due time will result in the application being deemed to be withdrawn (Art. 94(4) EPC).



Renggli-Zulliger, N  
Primary Examiner  
For the Examining Division

Enclosure(s): 3 page/s reasons (Form 2906)  
XP002277740

The examination is being carried out on the following application documents:

**Description, Pages**

1-72 as published

**Sequence listings, Pages**

1-49 as published

**Claims, Numbers**

1-10 filed with telefax on 13.11.2007

**Drawings, Sheets**

1/55-55/55 as published

**1. Cited documents**

The following document (D1) was cited according to Examiner's own knowledge (see Guidelines C-VI, 8.3). A copy of the document is annexed to the communication and the numbering will be adhered to in the rest of the procedure:

D1:ANGUS P ET AL: "Resistance to adefovir dipivoxil therapy associated with the selection of a novel mutation in the HBV polymerase" GASTROENTEROLOGY, ELSEVIER, PHILADELPHIA, PA, vol. 125, no. 2, 1 January 2003 (2003-01-01), pages 292-297, XP002277740 ISSN: 0016-5085.

**2. Amendments (Article 123(2)EPC)**

2.1 The new set of claims fulfills the requirements of Article 123(2) EPC.

### 3. Unity (Article 82 EPC)

3.1 The new set of claims is considered not unitary according to Article 82 EPC since mutations of the HBV reverse polymerase linked to a reduced sensitivity to ADV was known in the prior art **before the priority date 21.10.2003** of the present application, for the following reasons:

The subject-matter of the new set of claims 1-17 recites a method for determining the potential of HBV to exhibit reduced sensitivity to ADV comprising screening for a mutation in the nucleotide sequence encoding DNA polymerase wherein the presence of a mutation selected from rtT38K, rtR55H, rtQ215S, rtA/V200V, rtH237H/P and rtV253G is indicative of a variant wherein said variants exhibits a decreased sensitivity to ADV/or indicates the likelihood of resistance to ADV, or a method for detecting a variant HBV isolated from a subject exposed to ADV using the same mutations, the medical use of the HBV variants rtT38K, rtR55H, rtQ215S, rtA/V200V, rtH237H/P and rtV253G, a kit for such an assay using these HBV mutants as well as a vaccine comprising HBV with these mutations.

The common concept linking claims 1-17 could be seen as the provision of reverse polymerase mutants of HBV that have reduced sensitivity to ADV.

It can be derived from the teaching of D1, that a mutation of HBV rt polymerase that is linked to reduced sensitivity to ADV such as rtN236T is known.

Therefore, mutations of HBV rt polymerase that are linked to reduced sensitivity to ADV are known, thus the above defined concept cannot provide the link between the subject-matter of claims 1-17 (Rule 44 EPC).

The problem can therefore be seen as the provision of further mutations of HBV rt polymerases that are linked to reduced sensitivity to ADV.

Consequently, the subject-matter of claims 1-27 provides 6 distinct solutions i.e. 6 distinct inventions, each mutation being a single invention.

There is no technical relationship between these 6 inventions, because they all refer to different mutations or the reverse polymerase of HBV. This could also be further

devised so that each of the mutations of the surface antigen as claimed in 4 and 8 is considered as an invention.

Thus, the structural features are neither the same nor do they correspond to each other as required by Rule 44 EPC. Therefore, the requirements for unity of invention referred to in Article 82 EPC is not fulfilled.

3.2 The applicant is asked to state upon which invention or group of inventions further prosecution of the application should be based and to limit the application accordingly. The other inventions or groups of inventions is/are to be excised from the claims, description and drawings if any.

The subject-matter to be excised may be made the subject of one or more divisional applications. The divisional applications must be filed with the European Patent Office in Munich, The Hague or Berlin and shall be in the language of the proceedings relating to the present application (cf. Article 76(1) and Rule 36(2) EPC). The time limit for filing divisional applications (Rule 36(1) EPC) must be observed.

3.3 It appears that the applicant has also claimed subject-matter that has not been searched such as all the mutations of the surface antigen (see non-unity objection at the search state). It appears that except for sL173F that is linked to rtT38K, the others do not correspond to any of the 6 rt polymerase mutations claimed.

3.4 As a Service to the Applicant, following preliminary remarks are made:

The priority of 21.10.03 is valid only for rtT38K and rtR55H, the second priority of 25.2.2004 is valid for Q215S, A/V-200V, H237/H/P and V253G.

As a consequence, document WO03/087351 published 23 October 2003 that discloses rtV124A and rtQ215S in combination with sensitivity to ADV is considered prior art.